UNIVERSITI TEKNOLOGI MARA

Rent2U – MOBILE APPLICATION FOR RENTAL EQUIPMENT AT UiTM SHAH ALAM

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ABSTRACT

This project is about the development of a mobile application for rental equipment at UiTM Shah Alam. The reason for the development of this project is to help the students of UiTM Shah Alam to rent items and equipment that they need. A mobile application for rental equipment can solve problems such as most students are not able to afford new items and belongings. On some occasions, students also need specific items to attend a one-time event without overspending and they are unable to explore new hobbies without spending too much. Therefore, this project aims to develop an Android-based mobile application called Rent2U that can help students of UiTM Shah Alam to rent items and equipment that they need. The objectives of this project were to identify the requirements, to design, and to develop equipment rental application at UiTM Shah Alam. The chosen methodology for the development of this mobile application is the Mobile Application Development Lifecycle (MADLC). However, this project covered up until the testing phase only. Apart from that, the features of this mobile application include geolocation to find nearby items and equipment for rentals, search function to find items and equipment, and push notifications to alert the users about the listings that have been created by them for rental. The limitation of this project is that the mobile application cannot integrate with the payment gateway and the use of it is not be available in the mobile application. Hence, the significance of this project is that it can help the students and staff to rent and lend items and equipment by providing the users a platform for them to lend their belongings and at the same time able to rent items and equipment that they like. For future enhancements, this application may include a variety of options for the users to pay such as online banking, credit card, and others. Other than that, the application may also include goods and equipment verification to avoid dangerous items from being rented.

Keywords: Mobile application, Equipment Rental, Android, Mobile Application Development Lifecycle, geolocation, push notifications, payment gateway, Android Studio, Java, Firebase, Application Programming Interface (API)

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CHAPTER ONE

INTRODUCTION

This chapter provides the background and rationale for the study. This chapter includes the background information, problem statements, project aim, project priorities, scope, and project significance.

1.1 Project Background

Nowadays, mobile applications are growing at an enormous rate, it seems there is the application for everything, from food, groceries, clothing, booking a taxi ride to renting or sharing a home (Khaskheli et al., 2017). With the increase of smartphone users, the mobile application markets have also experienced explosive growth (Cheng Yang, Tao Wang, Gang Yin, Huaimin Wang, Ming Wu & Ming Xiao, 2014). In recent years, many Internet and mobile-device enabled peer-to-peer marketplaces have emerged to facilitate the short-term rental of durable goods (Fraiberger & Sundararajan, 2015).

Today customers face problems relating to time. In this sense, they must go to the dealer's office to rent any product such as vehicles, electronics, or clothes for renting or buying on rent and wait for their response (Parekh et al., 2018). Moreover, when the duration is short, renting is preferred, while buying is preferred for longer durations, even when the economic consequences of both choices are the same (Moore & Taylor, 2009). It will help the users to rent items and equipment which are needed temporarily instead of purchasing thereby saving the amount of purchasing it (Parekh et al., 2018). There are a few mobile applications that provide goods and equipment rental services. Rent4Me (Google Play Store, 2018), give users the ease of getting goods for rental by having the geo-tagging feature to look for available equipment to be

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